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PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S) : Michael Lee  
TITLE : GOLF IRON  
APPLICATION NO. : 10/619,295  
FILED : July 14, 2003  
CONFIRMATION NO. : 6308  
EXAMINER : Stephen Luther Blau  
ART UNIT : 3711  
LAST OFFICE ACTION : July 6, 2005  
ATTORNEY DOCKET NO. : NKTZ 2 00061

TRANSMITTAL OF  
APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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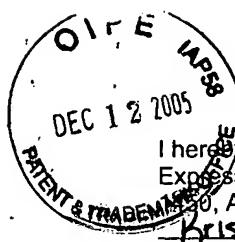
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Krisey E. Riley

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Date: December 12, 2005

Krisey E. Riley

PATENT

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This Appeal Brief is being filed within two months from the date of filing the Notice of Appeal under 37 C.F.R. § 41.31. This brief is accompanied by the \$250 fee set forth in 37 C.F.R. § 41.20(e)(2).

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i. ***Real party in interest.***

The real party in interest is Michael Lee, who is the inventor of the subject matter claimed in the subject application.

ii. ***Related appeals and interferences.***

There are no related appeals or interferences.

iii. ***Status of the claims.***

Claims 6, 7, 9, 10, 20-23 and 26 stand rejected. All of the aforementioned claims are being appealed.

iv. ***Status of amendments.***

In response to the Office Action mailed July 6, 2005, Appellant filed a response including an amendment to claim 26. Specifically claim 26 now depends from claim 22 in response to the Examiner's objection to claim 26. Appellant is not sure whether the Examiner has entered this amendment.

Appellant telephoned the Examiner on December 9 and December 12 to check the status of the amendment. Appellant had not been informed of the status of this claim amendment by the time this brief became due.

v. ***Summary of claimed subject matter.***

Appellant's claims are directed a golf club head that looks like a muscle back iron from the exterior, but the club head includes a cavity. As stated in Appellant's BACKGROUND OF THE INVENTION, muscle back irons require more consistent ball striking capability to play well using them. Therefore, many golfers feel a sense of prestige carrying muscle back irons. A muscle back iron does little good in one's golf bag, however, if one cannot consistently strike the ball well. Accordingly, the inventor developed a golf club that has the look of a muscle back iron while providing the forgiveness of a cavity back iron. The references that have been provided by the Examiner fail to teach or suggest such a golf club head.

Claim 1 defines a golf club head. With reference to FIGURES 1 and 2, a golf club head 10 includes a sole 18, a top edge 16 opposite the sole, a hosel 20, and a front surface 12 defining a strike face 26. See page 3 lines 16-19. The golf club head

10 also includes a rear surface 14 (FIGURE 1) opposite the front surface 12. With reference to FIGURE 5, which shows a cross section taken at line 5-5 in FIGURE 2, the rear surface 14 includes a blade surface 32 and a muscle back surface 30. The blade surface 32 is near the top edge 16 and substantially parallel to the front surface 12. The muscle back surface 30 is near the sole 18 and has no visible cavity thereon. A muscle back portion 34 is interposed between the front surface 12 and the muscle back surface 30. See page 3, lines 25-27. The muscle back portion 34 defines a cavity 38 and the cavity is not visible from the exterior of the golf club. See FIGURE 1.

Claim 22 also defines a golf club head 10 including a sole 18, a top edge 16, a hosel 20, a front surface 12 defining a strike face 26, a rear surface 14 opposite the front surface 12, a muscle back portion 34, and an insert 42. The rear surface 14 includes an at least substantially flat blade surface 32 and a contoured muscle back surface 30. The blade surface 32 extends to the top edge 16. The muscle back surface 30 is near the sole 18. The muscle back portion 34 is interposed between the front surface 12 and the muscle back surface 30. The muscle back portion 34 defines a cavity 38 disposed in the muscle back portion 34. The cavity 38 is not visible from the exterior of the golf club. An insert 42 comprising a high-rebound material is disposed in the cavity 38. See page 5, line 13.

vi. ***Grounds of rejection to be reviewed on appeal.***

A. Whether the Examiner erred in rejecting claims 6-7, 10 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Elkins (U.S. Design Patent No. D244,558) in view of Viollaz (U.S. Patent No. 5,447,311).

B. Whether the Examiner erred when rejecting claims 6-7, 10 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Elkins in view of Golden (U.S. Patent No. 6,551,200) and Viollaz.

C. Whether the Examiner erred when rejecting claims 9 and 21-23 under 35 U.S.C. § 103(a) as being unpatentable over Elkins in view of Viollaz as applied to claims 6-7, 10 and 20 above, and further in view of Motomiya (U.S. Patent No. 4,438,931).

**vii. Argument.**

1. **The Examiner erred when rejecting claims 20, 6, 7, 9, 10 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Elkins (U.S. Design Patent No. D244,558) in view of Viollaz (U.S. Patent No. 5,447,311).**

If the Examiner's proposed modification renders the reference unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Elkins is a design patent that discloses a muscle back iron. Muscle back irons concentrate mass towards the bottom half of the club head, which aids in getting the ball airborne when struck. Muscle back irons do not provide a lateral corrective bias to the ball. Providing no corrective lateral bias allows better players to "work" the ball from left to right or vice versa. See page 1, lines 12-27 of Appellant's specification. Providing a cavity in the muscle back iron of Elkins would necessarily provide a lateral corrective bias to the golf ball. Such a modification would render the club head disclosed in Elkins unsatisfactory for its intended purpose since a golfer would not be able to "work" the golf ball as easily. Accordingly, one skilled in the art would not modify the muscle back iron of Elkins to include the cavity disclosed in Viollaz. For this reason alone, the Examiner's rejection of claim 20, and those claims that depend from claim 20, should be reversed.

The Examiner erred for additional reasons as well. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ 2.d 1313, 1317 (Fed. Cir. 2000). For the requisite suggestion, teaching or motivation to modify the muscle back iron of Elkins to include a cavity that is disclosed in Viollaz, the Examiner contends that it would have been obvious to modify the head of Elkins to have a cavity filled with polyurethane to provide vibration dampening. The Examiner further contends that it would have been obvious to modify the head of Elkins to have a cavity that is not visible from an exterior of the club to prevent the filling material from inadvertently exiting the cavity. Viollaz discloses a filling material 5 in a cavity 4 – but Viollaz makes no mention that the cavity is not visible from an exterior of the club to prevent the filling material from inadvertently exiting the cavity.

In other words, Viollaz provides no explicit suggestion to provide a cavity that is not visible from the exterior of the golf club. Furthermore, an insert in a cavity of a golf club could just as easily remain in a cavity that is visible from the exterior of the golf club if the cavity and/or the insert were properly shaped. For example, Rife (US 2003/0139225), which was previously cited by the Examiner, shows in FIG. 15 an insert 830 retained in a rear cavity 826, which is visible from an exterior of the club head, by appropriately shaped sides 832. Since the Examiner has failed to provide a proper teaching, suggestion, or motivation to combine Elkins and Viollaz, the Examiner's rejection of claim 20, and those claims that depend from claim 20, should be reversed.

**2. The Examiner erred when rejecting claim 20, 6, 7, 9, 10 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Elkins in view of Golden (U.S. Patent No. 6,551,200) and Viollaz.**

A reference must be considered in its entirety, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.* 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983). In the BACKGROUND OF THE INVENTION, Golden discusses that "a thinner club face at the center portion ... may not impart the desired initial velocity or spin rate to the golf ball." Golden overcomes this by providing a stiff region in the center of the club head. Golden teaches a stiffness zone S located in a section of the central region of the club head, as seen in FIGURE 5. Col. 4, lines 52-53. This stiffness zone is discussed in detail in column 5. Golden teaches that stiffness is a function of the bending stiffness of a beam-like cross section. Golden teaches that "remainder of the lower portion 14 of the club head should include a thickness increase of at least 15%, as compared to the top thickness  $T_{top}$ , which corresponds to a stiffness increase of more than 50%. Preferably, the thickness increases at least 25%, which corresponds to a stiffness increase of more than 95%." Col. 5, lines 58-63. When discussing FIGURE 8A, which discloses a cavity, Golden et al. teaches that a cavity can be formed in the shell, but "[a]ny suitable material providing the appropriate stiffness in conjunction with the outer shell may be used within the central region." Col. 6, lines 48-50.

When considering Golden as a whole, one skilled in the art would not simply modify the club head of Elkins to include a cavity as the Examiner suggests. Providing a cavity in the club head of Elkins would result in a thinner club face at the center portion which may not impart the desired initial velocity or spin rate to the golf ball as

desired by Golden. Accordingly, Golden specifically teaches away from Appellant's invention as claimed in claim 20.

In rejecting claim 20, the Examiner further relied on Viollaz to disclose a cavity that is not visible from the exterior of the golf club. As indicated above, Viollaz makes no mention that the cavity is not visible from an exterior of the club to prevent the filling material from inadvertently exiting the cavity. Additionally, an insert in a cavity of a golf club could just as easily remain a cavity that is visible from the exterior of the golf club if the cavity and/or the insert were properly shaped. Accordingly, the Examiner's rejection of claim 20, and those claims that depend from claim 20, should be reversed.

**3. The Examiner erred when rejecting claims 9 and 21-23 under 35 U.S.C. § 103(a) as being unpatentable over Elkins in view of Viollaz as applied to claims 6-7, 10 and 20 above, and further in view of Motomiya (U.S. Patent No. 4,438,931).**

The mere fact that references *can* be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ.2d 1430 (Fed. Cir. 1990). When rejecting claim 22, the Examiner argues that it would have been obvious to modify the head of Elkins to have a cavity that is not visible from an exterior of the club to prevent the filling material from inadvertently exiting the cavity. This reasoning is tenuous. The insert comprising a high-rebound material could just as easily remain a cavity that is visible from the exterior of the golf club if the cavity and/or the insert were properly shaped. For example, Rife (2003/0139225), which was previously cited by the Examiner, shows in FIG. 15 an insert 830 retained in a cavity by sides 832. The cavity is visible from an exterior of the golf club.

Furthermore, as stated above with regard to claim 20, modifying the club head of Elkins to include a cavity would greatly reduce a golfer's ability to work the ball, which is an intended function of a muscle back iron. Accordingly, the Examiner's rejection of claims 9 and 21-23 should be reversed.

viii. ***Claims appendix.***

1-5. (Canceled).

6. (Previously Presented) The golf club head of claim 20, wherein the muscle back surface includes an upper ledge that generally follows the contour of the top edge.

7. (Previously Presented) The golf club head of claim 20, wherein the cavity is vertically spaced from the sole.

8. (Canceled).

9. (Previously Presented) The golf club head of claim 21, wherein the elastomer comprises a polyurethane elastomer.

10. (Previously Presented) The golf club head of claim 20, wherein the muscle back portion covers at least half of the surface area of the rear surface.

11-19. (Canceled).

20. (Previously Presented) A golf club head comprising:

a sole;

a top edge opposite the sole;

a hosel;

a front surface defining a strike face;

a rear surface opposite the front surface, the rear surface including a blade surface and a muscle back surface, the blade surface being near the top edge and substantially parallel to the front surface, the muscle back surface being near the sole and having no visible cavity thereon; and

a muscle back portion interposed between the front surface and the muscle back surface and defining a cavity disposed in the muscle back portion; wherein the cavity is not visible from the exterior of the golf club.

21. (Previously Presented) The golf club head of claim 20, further comprising an elastomer material at least substantially filling the cavity, wherein the elastomer material has a specific gravity less than the material displaced by the cavity.

22. (Previously Presented) A golf club head comprising:

a sole;

a top edge;

a hosel;

a front surface defining a strike face;

a rear surface opposite the front surface, the rear surface including an at least substantially flat blade surface and a contoured muscle back surface, the blade surface extending to the top edge and the muscle back surface being near the sole;

a muscle back portion interposed between the front surface and the muscle back surface and defining a cavity disposed in the muscle back portion, wherein the cavity is not visible from the exterior of the golf club; and

an insert comprising a high-rebound material disposed in the cavity.

23. (Previously Presented) The golf club head of claim 22, wherein the blade surface is at least substantially parallel to the front surface.

24. (Cancelled)

25. (Cancelled)

26. (Currently Amended) The golf club head of claim 22, wherein the insert comprises a liquid, a foam or a compressible material.

In view of the above, Appellant respectfully submits that claims 6, 7, 9, 10, 20-23 and 26 are in condition for allowance. Therefore, Appellant requests that the Board of Patent Appeals and Interferences reverse each rejection made by the Examiner.

Respectfully submitted,



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